

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003122**Date Inspected:** 16-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Lui Hua jie, An Qing Xiang	CWI Present:	Yes	No
Inspected CWI report:	Yes No N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes No N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes No N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes No N/A	Approved WPS:	Yes	No N/A
		Delayed / Cancelled:	Yes	No N/A

Bridge No: 34-0006**Component:** Tower**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Ken Jobes, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, to randomly monitor welding and Quality Control (QC) functions. While on site, the QA Inspector observed and/or discovered the following:

New Tower Bay 1

The Caltrans QA Inspector randomly observed the machine Submerged Arc Welding (SAW) of fill passes on Weld Nos. SSD1-SA179D/E-22, 18, 30A, 28A and SSD1-SA179E/E-3A, 13, 2A, 11, 7, 31A, Skin Plate Face "C".

The ten weld numbers are actually on one weld joint. The "A" welds are CJP and the remaining welds are PJP. They alternate CJP/PJP along the joint. The welding was performed in the flat groove (1G) welding position by two welding operators; Xu Yan (I. D. No. 052917) and Xi Xiu shui (I. D. 040489). Welding Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S was used for the CJP portion of the weld and WPS-B-T-2312-B-P3-S was used for the PJP portion. Certified Welding Inspector (CWI), Liu Hua jie (CWI No. 07120741), was present during the welding, as was ABF QA Inspectors, Wei Jian Bo and Li Han jie. The QA Caltrans Inspector verified the qualifications of the welding operators, and that the electrode/flux classification, diameter of electrode, amperage, voltage, travel speed, and preheat/interpass temperatures were within the specified ranges on the applicable WPS.

The Caltrans QA Inspector also randomly observed the final magnetic particle examination (MT) on Weld Nos. SSD1-SA40B/E-2, 4B and SSD1-SA40C/E-2, 31, 343 by ZPMC Nondestructive Examination (NDE) technician, Bu Tin Yui. ZPMC had not notified Caltrans prior to performing this final examination. The welds were ground

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flush prior to MT and the edges on each end were examined. The five weld numbers were accepted by the ZPMC technician, although he failed to mark SSD1-SA40C/E-2 as accepted. All five of these weld numbers are on the same joint.

The Caltrans QA Inspector also randomly observed the milling of the weld bevels on miscellaneous tower parts and flame cutting at one work stations.

New Tower Bay 2

The Caltrans QA Inspector randomly observed the machine Submerged Arc Welding (SAW) of fill passes on Weld Nos. ESD1-SA294G/G-58A, 53 and ESD1-SA294F/G-158A, 155, Skin Plate Face "C". The welding operator was Xia Yong liu (I. D. No. 048882).

The Caltrans QA Inspector also randomly observed the machine Submerged Arc Welding (SAW) of fill passes on Weld Nos. ESD1-SA294G/G-57A, 55 and ESD1-SA294F/G-157A, 159, Skin Plate Face "C". The welding operator was Sun Bing fa (I. D. No. 062046).

For both of the above welds, the four weld numbers are actually on one weld joint. The "A" welds are CJP and the remaining welds are PJP. They alternate CJP/PJP along the joint. Two Welding Procedure Specifications (WPS) were also used. WPS-B-T-2221-B-U3c-S was used for the CJP portion of the weld and WPS-B-T-2321-B-P3-S was used for the PJP. Certified Welding Inspector (CWI), An Qing Xiang (CWI No. 07120651), was present during the welding of both joints, as was ABF QA Inspector, Wang Cheng jun. The Caltrans QA Inspector verified the qualifications of the welding operator, and that the electrode/flux classification, diameter of electrode, amperage, voltage, travel speed, and preheat/interpass temperatures were within the specified ranges on the applicable WPS. .

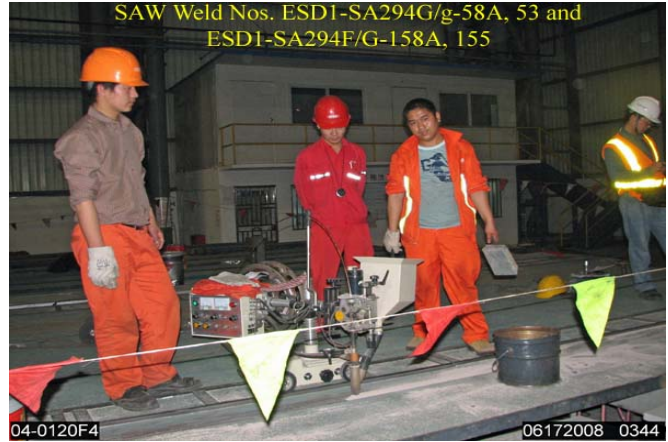
The Caltrans QA Inspector also randomly observed the milling of the weld bevels on miscellaneous tower parts and flame cutting at one work stations.

All above observations appeared to meet the requirements of the job specifications.



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Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Jobes, Kenneth

Quality Assurance Inspector

Reviewed By: Carreon, Albert

QA Reviewer